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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/941,879

08/29/2001

Taisei Hirayama

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7842

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7590

04/01/2003

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER

PATEL, PARESH H

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,879

Applicant(s)

HIRAYAMA ET AL. 

Examiner

Paresh Patel

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 7-8 and 11-13 are rejected under 35 U.S.C. 102(a) as being anticipated by Ikeya et al. (US 6251696).

Regarding claim 1, Ikeya et al. (hereafter Ikeya) in fig. 1-8 discloses: a sample assembly for a thermoelectric analyzer comprising:

(a) an electrically insulating substrate [18];

(b) a pair of junction electrode layers [Z5, Z6] formed on said substrate;

(c) a sample [11] fixed to said substrate;

(d) an adhesive layer [15 and 19 or 20] disposed between said sample and said substrate and made of a material selected from a group consisting of indium and gold-tin alloy [lines 1-15 of column 6];

(e) a pair of electrode layers [Z1, Z2] formed on a same plane of said sample;

and

(f) two electrically-conductive wire [14 of Z1 and 14 of Z2 in fig. 6] means: one electrically-conductive wire means connecting one of said electrode layers with one of said junction electrode layers, and another electrically-conductive wire means

connecting the other of said electrode layers with the other of said junction electrode layers.

Regarding claim 2, Ikeya discloses: a sample assembly according to claim 1, wherein said adhesive layer is made of indium [20].

Regarding claims 3 and 8, Ikeya discloses: a sample assembly according to claim 2, wherein said substrate is made of a material selected from a group consisting of aluminum nitride, boron nitride, beryllium oxide and aluminum oxide [ceramic 18].

Regarding claim 7, Ikeya discloses: a sample assembly according to claim 1, said adhesive layer is made of gold-tin alloy [lines 1-15 of column 6].

Regarding claim 11, Ikeya discloses: a sample assembly according to claim 4, wherein said pair of electrode layers, said pair of junction electrode layers and said wire means are arranged mirror-symmetrical with respect to a center of said sample [see plan view of fig. 1, 3 and 7].

Regarding claim 12, Ikeya discloses: a sample assembly according to claim 5, wherein said sample is compound semiconductor [11].

Regarding claim 13, Ikeya discloses: a sample assembly according to claim 1, wherein said sample has a plane size of 5 mm X 5 mm or less [lines 22-29 of column 6].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeya as applied to claims 3, 2 and 1 above.

Regarding claims 4 and 10, Ikeya discloses: a sample assembly according to claim 3, wherein each of said electrode layers and said junction electrode layers is made of a multilayer including a top layer which is a gold layer [lines 43-55 of column 5]. Ikeya do not disclose said wire means are gold (Au) wires. Rather, Ikeya discloses that said wire means are aluminum [14]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Au instead Al, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 5, Ikeya discloses: a sample assembly according to claim 4, wherein said pair of electrode layers, said pair of junction electrode layers and said wire means are arranged mirror-symmetrical with respect to a center of said sample [see plan view of fig. 1, 3 and 7].

Regarding claim 6, Ikeya discloses: a sample assembly according to claim 5, wherein said sample is compound semiconductor [11].

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeya as applied to claim 1 above, and further in view of Takahashi et al. (US 5126813).

Regarding claim 9, Ikeya discloses the claimed invention except for said sample assembly according to claim 1, wherein said sample assembly is adapted to be supported by two support rods which serve also as conductors for an electric circuit. Takahashi et al. (hereafter Takahashi) discloses sample assembly [fig. 1] is adapted to be supported by two support rods [7 with 100] which serve also as conductors for an electric circuit. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the support of Takahashi with the sample assembly of Ikeya, in order to support the chip while transmitting a data from the chip. Ikeya and Takahashi do not disclose gold washers are inserted between said support rods and said junction electrode layers. Use of gold washer is design choice because it is well known in the art that gold is a good conductor. Ikeya also discloses that junction electrode layers has gold layer on the top for electrical connection. Therefore, it would have been obvious to use gold washer for good electrical contact between two electrodes when one contact is used as support for said substrate.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 703-306-5859. The examiner can normally be reached on M-F (8:30 to 4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 703-308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Paresh Patel
March 22, 2003



KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800